



Sep 17-8:32 AM

① Mult + Divide with Sig. digits

Q  $2.39 \times 1.5 \times 3.1415 =$

Significant Digits. → (3) (2) (5)

$11.2622775 =$  (11)

Ans has same # Sig. digits as # in Q with fewest Sig. digits.

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② Add + Subt 516 Digits

④ ← #'s of decimal point.

② ← Smallest #

③

$$\begin{array}{r}
 2.3906 \\
 3.14 \\
 1.752 \\
 \hline
 7.2826
 \end{array}$$

7.28

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Scientific Notation

Way to express very small / large #'s.

3.000000000 m/sec

1 non-zero # of decimal point.

$3 \times 10^{-8}$  m/sec

# > 1  
⊕ exponent

# < 1  
⊖ exp.

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$0.00042$   
 $4.2 \times 10^{-4}$   
 $4.2$  EF -  
 $[4][.] [2] [EF] [+/-] [4]$   
 $[(-)]$

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$1. \times 10^{-7}$   
 $0000001$

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Length -  $0.01$   $0.001$   $1$   $1000$   
 $cm, mm, m, km$   
 $in, yds, miles.$

Volume  $\rightarrow$   $l, ml$

$V = l * w * h$   
 $V = cm * cm * cm$   
 $V = cm^3$   
 $\rightarrow cc = ml$

Mass  $g, kg, mg$

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Temp  $\rightarrow$   $^{\circ}C, ^{\circ}F$

Energy  $\rightarrow$   $J$       Joules

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# Factor Label Method

Dimensional Analysis  
Listen to your units

Let the units drive the calculations

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$\frac{1 \text{ ft}}{12 \text{ in}}$  ,  $\frac{1 \text{ yd}}{3 \text{ ft}}$  ,  $\frac{1 \text{ mile}}{5280 \text{ ft}}$

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$3.2 \text{ miles} = \underline{\hspace{2cm}} \text{ in}$

Conversion Factors Value = 1

$$\frac{3.2 \cancel{\text{ miles}}}{1} * \frac{5280 \cancel{\text{ ft}}}{1 \cancel{\text{ miles}}} * \frac{12 \text{ in}}{1 \cancel{\text{ ft}}} = 202752 \text{ in}$$

$$2.02752 * 10^5 \text{ in}$$

3.2 miles	5280 ft	12 in	=
1	1 mile	1 ft	

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$$D = \frac{0.791 \text{ g}}{\text{ml}}, \quad 250 \text{ g, mass}$$

<del>1 ml</del>	<del>250 g</del>	<del>1 l</del>
<del>0.791 g</del>	1	<del>1000 ml</del>

Find  $l$   
Numerator (TOP)

0.316 l

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4 + 8 odd #'s

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